AMENDMENTS TO THE CLAIMS

1. (Currently Amended)   A method comprising:

generating, in a block diagram modeling environment, an executable block diagram representing a system, the generated executable block diagram being simulatable over a time span;

receiving an input for selecting a first graphical object in [[an]]the executable block diagram representing a system, the first graphical object having one or more properties;

displaying a list of one or more transformation operations performable on the first graphical object for transforming the first graphical object into a second graphical object for the executable block diagram;

receiving an input for selecting one of the one or more transformation operations;

applying, using an electronic device, the selected one of the one or more transformation operations on the first graphical object for creating the second graphical object, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object; [[and]]

incorporating the first graphical object and incorporating the second graphical object into the executable block diagram within the block diagram modeling environment; and

simulating the executable block diagram over the time span.

2. (Previously Presented)   The method of claim 1, wherein the list is displayed in one of a context menu, a toolbar or a roll-up menu.

3. (Previously Presented)   The method of claim 1, wherein the first graphical object is selected by moving a pointer over the first graphical object.

4. – 6. (Canceled)

7. (Previously Presented)   The method of claim 1, wherein the second graphical object has a class that is different from a class of the first graphical object.

8. (Previously Presented)   The method of claim 1, wherein the second graphical object is an instance of a superclass of the first graphical object.

9. (Previously Presented)   The method of claim 1, wherein the second graphical object is an instance of a subclass of the first graphical object.

10. (Previously Presented)   The method of claim 1, wherein the second graphical object shares a base class with the first graphical object.

11. (Canceled)

12. (Previously Presented)   The method of claim 1, wherein the selected transformation operation is a copy and morph operation.

13. (Previously Presented)   The method of claim 1, wherein the second graphical object is a signal tap block for tapping a signal from the first graphical object.

14. (Previously Presented)   The method of claim 13, wherein the first graphical object is a block having an output that represents the signal.

15. (Previously Presented)   The method of claim 13, wherein the first graphical object is a line representing the signal.

16. (Previously Presented)   The method of claim 1, wherein the first graphical object and the second graphical object are functionally related blocks.

17. (Previously Presented)   The method of claim 1, wherein the first graphical object and the second graphical object are one of source blocks or sink blocks.

18. (Previously Presented)   The method of claim 1, wherein the second graphical object is an inverse graphical object of the first graphical object.

19. (Previously Presented)   The method of claim 1, wherein one of the second graphical objector the first graphical object is a bus creator block and the other of the second graphical object and the first graphical object is a bus selector block.

20. (Canceled)

21. (Previously Presented)   The method of claim 1, wherein the second graphical object has one or more implicit links to the first graphical object.

22. (Canceled)

23. (Previously Presented)   The method of claim 1, further comprising:
        executing a customized transformation operation.

24. (Currently Amended)   A method comprising:
        generating, in a block diagram modeling environment, an executable block diagram representing a system, the generated executable block diagram being simulatable over a time span:
        receiving an input for selecting a first graphical object in [[an]]the executable block diagram-representing a system, the first graphical object having one or more properties;
        displaying a list of one or more transformation operations performable on the first graphical object;
        receiving an input for selecting a transformation operation in the list;
        based on the selected transformation operation, executing, using an electronic device, a copy and morph operation on the first graphical object to create a second graphical object for the executable block diagram, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object; [[and]]
        incorporating the first graphical object and incorporating the second graphical object into the executable block diagram within the block diagram modeling environment; and
        simulating the executable block diagram over the time span.

25. (Previously Presented)   The method of claim 24, wherein the first graphical object outputs a signal, and wherein executing the copy and morph operation further comprises:

creating a signal tap block for tapping the signal.

26. (Previously Presented)   The method of claim 24, wherein the first graphical object is a line representing a signal, and wherein executing the copy and morph operation further comprises:

creating a signal tap block for tapping the signal.

27. (Previously Presented)   The method of claim 24, wherein the first graphical object and the second graphical object are functionally related blocks.

28. (Previously Presented)   The method of claim 24, wherein the first graphical object and the second graphical object are source blocks.

29. (Previously Presented)   The method of claim 24, wherein the second graphical object is an inverse graphical object of the first graphical object.

30. (Previously Presented)   The method of claim 24, wherein one of the second graphical object or the first graphical object is a bus creator block and the other of the second graphical object and the first graphical object is a bus selector block.

31. (Canceled)

32. (Previously Presented)   The method of claim 24, wherein the list is displayed in one of a context menu, a toolbar or a roll-up menu.

33. (Previously Presented)   The method of claim 24, further comprising:

receiving a command associated with the copy and morph operation.

34. (Previously Presented)   The method of claim 33, wherein the command is received from a command line mechanism.

5

35. – 36. (Canceled)

37. (Currently Amended)   A method comprising:

generating, in a block diagram modeling environment, an executable block diagram representing a system, the generated executable block diagram being simulatable over a time span;

receiving an input for selecting a first graphical object in [[an]]the executable block diagram representing a system, the first graphical object having one or more properties;

receiving an input for selecting a transformation operation from the list; and

based on the selected transformation operation, executing, using an electronic device, a copy and morph operation on the first graphical object to create a second graphical object for the executable block diagram, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object; [[and]]

incorporating the first graphical object and incorporating the second graphical object into the executable block diagram within the block diagram modeling environment; and

simulating the executable block diagram over the time span.

38. (Previously Presented)   The method of claim 37, wherein the second graphical object is a signal tap block for tapping a signal.

39. (Previously Presented)   The method of claim 37, wherein the second graphical object is functionally related to the first graphical object.

40. (Previously Presented)   The method of claim 37, wherein the second graphical object is an inverse graphical object of the first graphical object.

41. (Previously Presented)   The method of claim 40, wherein one of the inverse graphical object or the first graphical object is a bus creator block and the other of the inverse graphical object and the first graphical object is a bus selector block.

42. (Canceled)

43. (Previously Presented)   The method of claim 37, further comprising:

      displaying a list of one or more transformation operations, the displayed list being in one of a context menu, a toolbar or a roll-up menu.

44. (Previously Presented)   The method of claim 37, further comprising:

      receiving a command associated with the copy and morph operation.

45. (Previously Presented)   The method of claim 44, wherein the command is received from a command line mechanism.

46. – 47. (Canceled)

48. (Currently Amendment) A computer-readable medium holding computer-executable instructions, the medium comprising one or more instructions for:

      generating, in a block diagram modeling environment, an executable block diagram representing a system, the generated executable block diagram being simulatable over a time span;

      receiving an input for selecting a first graphical object in [[an]]the executable block diagram representing a system, the first graphical object having one or more properties;

      displaying a list of one or more transformation operations performable on the first graphical object for transforming the first graphical object into a second graphical object for the executable block diagram;

      receiving an input for selecting one of the one or more transformation operations;

      applying the selected one of the one or more transformation operations on the first graphical object for creating the second graphical object, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object; [[and]]

      incorporating the first graphical object and incorporating the second graphical object into the executable block diagram within the block diagram modeling environment; and

      simulating the executable block diagram over the time span.

49. (Previously Presented)   The medium of claim 48, further comprising one or more instructions for:

  receiving an input for selecting a transformation operation from the list; and

  executing the selected transformation operation on the first graphical object to create the second graphical object.

50. (Currently Amendment) A computer-readable medium holding computer-executable instructions, the medium comprising one or more instructions for:

  generating, in a block diagram modeling environment, an executable block diagram representing a system, the generated executable block diagram being simulatable over a time span;

  receiving an input for selecting a first graphical object in [[an]]the executable block diagram representing a system, the first graphical object having one or more properties;

  displaying a list of one or more transformation operations performable on the first graphical object;

  receiving an input for selecting a transformation operation in the list;

  based on the selected transformation operation, executing a copy and morph operation on the first graphical object to create a second graphical object for the executable block diagram, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object; [[and]]

  incorporating the first graphical object and incorporating the second graphical object into the executable block diagram within the block diagram modeling environment; and

  simulating the executable block diagram over the time span.

51. (Currently Amended)   A computer readable medium holding computer-executable instructions, the medium comprising one or more instructions for:

  generating, in a block diagram modeling environment, an executable block diagram representing a system, the generated executable block diagram being simulatable over a time span;

  receiving an input for selecting a first graphical object in [[an]]the executable block diagram representing a system, the first graphical object having one or more properties;

  receiving an input for selecting a transformation operation from the list;

based on the selected transformation operation, executing a copy and morph operation on

the first graphical object to create a second graphical object for the executable block diagram,

the second graphical object having one or more properties that are different from the one or more

properties of the first graphical object; [[and]]

incorporating the first graphical object and incorporating the second graphical object into

the executable block diagram within the block diagram modeling environment; and

simulating the executable block diagram over the time span.

52. (Currently Amended)   A system comprising:

input means for inputting data to a block diagram modeling application;

a display device for displaying an executable block diagram representing a system, the

executable block diagram being simulatable over a time span, the executable block diagram

containing a first graphical object, the first graphical object having one or more properties;

receiving means for receiving an input for selecting the first graphical object in the

executable block diagram; and

an electronic device including memory for storing computer program instructions and

data, and a processor for executing the stored computer program instructions, the computer

program instructions including one or more instructions for:

displaying a list of one or more transformation operations performable on the

first graphical object for transforming the first graphical object into a second graphical

object for the executable block diagram,

applying a selected one of the one or more transformation operations on the first

graphical object for creating the second graphical object, the second graphical object

having one or more properties that are different from the one or more properties of the

first graphical object, [[and]]

incorporating the first graphical object and incorporating the second graphical

object into the executable block diagram within the block diagram modeling application;

and

simulating the executable block diagram over the time span.

53. (Canceled)

54. (Currently Amended)   A system comprising:

input means for inputting data to a <u>block diagram</u> modeling application;

a display device for displaying an executable block diagram representing a dynamic system, <u>the executable block diagram being simulatable over a time span,</u> the executable block diagram containing a first graphical object having one or more properties;

receiving means for receiving an input for selecting the first graphical object in the executable block diagram; and

an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, the computer program instructions including one or more instructions for:

displaying a list of one or more of transformation operations performable on the first graphical object,

based on a selected transformation operation in the list, executing a copy and morph operation on the first graphical object to create a second graphical object for the executable block diagram, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object.<u>[[; and]]</u>

incorporating the first graphical object and incorporating the second graphical object into the executable block diagram <u>within the block diagram modeling application,</u> <u>and</u>

<u>simulating the executable block diagram over the time span.</u>

55. (Currently Amended)   A system comprising:

input means for inputting data to a <u>block diagram modeling</u> ~~diagramming~~ application;

a display device for displaying an executable block diagram representing a dynamic system, <u>the block diagram being simulatable over a time span,</u> the block diagram containing a first graphical object having one or more properties;

receiving means for receiving an input for selecting the first graphical object in the executable block diagram; and

an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, the computer program instructions including one or more instructions for:

based on a selected transformation operation, executing a copy and morph
operation on the first graphical object to create a second graphical object for the
executable block diagram, the second graphical object having one or more properties that
are different from the one or more properties of the first graphical object, [[and]]

incorporating the first graphical object and incorporating the second graphical
object into the executable block diagram within the block diagram modeling application,
and

simulating the executable block diagram over the time span.

56. (Previously Presented)   The method of claim 1, further comprising:

caching information related to the first graphical object prior to displaying the list of one
or more transformation operations performable on the first graphical object.

57. (Previously Presented)   The method of claim 1, further comprising:

receiving an input selecting a position to place the second graphical object on the
executable block diagram; and

placing the second graphical object on the selected position.